Roundtable discussion on Scientific Integrity Practices in Science

Readahead material

Hello colleagues:

Thank you for your willingness to participate in a roundtable discussion on Scientific Integrity. This roundtable is one of 4 roundtables on Scientific Integrity, with a specific focus on scientific integrity practices in science. The discussion is scheduled for Friday, 16th July 2021 from 10 Am – 12 Noon. To ensure that we have a productive discussion, our team has put together a readahead package that includes:

1. Your Agency's Scientific Integrity Policy [Not included here] – Please take the time to familiarize yourself with your Agency's Scientific Integrity Policy, if you have not already done so.

2. A document that provides an overview of the issues, the purpose of the roundtable discussion, some questions to seed the discussion, and a few examples of how some agencies/departments are addressing these challenges. [Attached]

3. President Biden's Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking, with the section relevant to our discussion highlighted in yellow. [Attached]

Thank you again for your interest and commitment to scientific integrity in the Federal Government.

Respectfully,

Bill, P.V., Anne, and Sharon

Scientific Integrity Roundtable

July 16, 2021

10 am - noon

Background

On January 27, 2021, President Biden issued a memorandum titled, "Restoring Trust in Government through Scientific Integrity and Evidence-Based Policymaking." In that memorandum, the President called for establishing an interagency task force to conduct a thorough review of the effectiveness of agency scientific integrity policies. The review should identify effective practices regarding engagement of Federal scientists, as well as contractors working on scientific matters for agencies, with news media and on social media; effective policies that protect scientific independence during clearance and review, and that avoid improper political interference in research or data collection; effective approaches for handling any disagreements about scientific methods and conclusions; effective reporting practices that promote transparency in the implementation of agency scientific-integrity policies and in the handling of any allegations of misconduct; effective practices for educating and informing employees and contractors of their rights and responsibilities related to agency scientific-integrity policies; promising opportunities to address gaps in current scientific-integrity policies related to emerging technologies, such as artificial intelligence and machine-learning, and evolving scientific practices, such as citizen science and community-engaged research; effective approaches to minimizing conflicts of interest in Federal Government science; and policies that support the professional development of Federal scientists.

Purpose

The purpose of the roundtable is to gather input from stakeholders about scientific integrity practices. In particular, information and best practices are sought around the following themes:

- Ensuring the independence, autonomy, and effectiveness of scientific integrity officials and chief scientists.
- Addressing gaps in current scientific integrity policies, especially related to emerging technologies, such as artificial intelligence and machine-learning, and evolving scientific practices, such as citizen science and community-engaged research
- Handling disagreements about scientific methods and conclusions
- Supporting the professional development of Federal scientists

Questions for Roundtable Participants

1. What are some ways to ensure the independence and autonomy of scientific integrity programs? Should scientific integrity programs have enforcement authority? Where in an organization should the scientific integrity program reside?
   Example Practices:
   - **DOI** SI staff have a strong working relationship with the Office of the Inspector General (OIG), and they are available for assistance in the event that the Scientific Integrity Official (SIO) is concerned about retaliation for making a finding that might draw retaliation from leadership.

- **DOI** policy assigns the Departmental SIO (DSIO) the responsibility for assigning formal complaints. Usually, the DSIO will assign the complaint to the appropriate bureau's SIO (BSIO). In the event that a BSIO feels too close to a matter or otherwise cannot be investigated impartially/independently, the DSIO has the authority to assign the complaint to another BSIO.
- **DOI** uses full-time SIO Coordinators for the SI enterprise. At DOI, the SIO role is ancillary to other duties. 2+ full-time coordinators are on-hand to assist SIOs as they balance their SI role with their normal work duties and otherwise manage programmatic aspects of the enterprise.
- **USGS**: The Office of Science Quality and Integrity houses the USGS SIO as well as the DOI SI Coordinators. The office additionally houses the bureau's information quality, science policy (FSP), quality assurance, and bureau-level clearance of scientific products. This co-location of functions provides a much-needed synergy as USGS scientific integrity issues often require subject matter expertise in one or more of these functions.
- **DOI Concern**: DOI SI policy assigns scientific integrity leadership roles to high-level, congressionally approved officials. In theory, this should function to give the policy visibility and provide high-level support for scientific integrity. However, if an incoming administration is indifferent or hostile to scientific integrity, this could have a negative effect. Overall, if we're implementing department/agency-level policies, what is to prevent a hostile Secretary/Administrator from watering down the policy or just revoking it?

2. How do you ensure scientific integrity practices in both intramural and extramural research?
   Example Practices:
   - **NASA Guidelines for Promoting Scientific and Research Integrity**, maintained by the Office of Chief Scientist: NASA as a funder of research adheres to policies aimed at 1) ensuring the quality, credibility, and dissemination of research it funds, 2) ensuring the integrity of the award process for grants and contracts and 3) employing an open and transparent competition process for funding the most meritorious science and technology proposals. NASA extramural research solicitations are managed by program officers which monitor the entirety of the panel peer-review process. The program officers ensure that every reviewer is trained on the charge of the panel and instructed on how to identify potential conflicts of interest and biases. In addition, the program officers monitor for potential conflicts of interest and biases that may occur during the panel discussions. Finally, the panel report is thoroughly reviewed by a group chief (for scientific clarity) and 2 program officers (for accuracy of findings) to ensure the rationale of the panel's findings. Despite the above-mentioned efforts unconscious biases still lead to discrimination based on gender and race and scientists at small universities, who may not hold prestigious positions. To this end, NASA provides training to help reviewers become aware of such biases, and more recently NASA has begun to implement a review process in which the reviewers will not know who the proposer when judging the scientific merit of a proposal.
   - **NIST,** Incorporating scientific integrity into the foundational culture of an organization. NIST Core Values: Perseverance, Integrity, Inclusivity, Excellence. Part of this is being seen by other agencies and academic/industry partners as being objective. This is central is NIST's metrology mission. NIST regularly partners with other agencies to

conduct research and perform measurements so that the other agency may use the results to create policy. As such, the reputation of objectivity and dedication to scientific integrity is baked into the culture and policies. It is addressed repeatedly in different forums with staff.

3. Are there current or emerging technologies (such as AI/ML) for which existing scientific integrity processes are inadequate?
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4. What are some ways to incorporate scientific integrity into citizen science and community-engaged research?
5. What are some good ways for resolving disagreements concerning scientific methods or conclusions?
   Example practices:
   - **DHS S&T** requires that proposed research at the Centers of Excellence complies with both the university's and DHS's requirements for Human Subject Research, Animal Care & Handling, Data Privacy, etc. Once the research plan has been validated, S&T doesn't place any restrictions on the release/publication of COE results.

   - **Combination of role and structure established in legislation, and a good working relationship:** The Institute of Education Sciences (IES) is the non-partisan research, evaluation, and statistics arm of the Department of Education, and was established by the Education Sciences Reform Act of 2002 (ESRA). ESRA stipulates that IES' work be objective, secular, neutral, nonideological, and free of partisan political influence and racial, cultural, gender, or geographic bias. ESRA mandates that statistics, evaluation, or research reports that are supported or produced by IES undergo rigorous peer review, and also grants IES independent publication authority (approval from the Secretary or any other Department office is not required or sought). IES' National Center for Education Evaluation and Regional Assistance (NCEE)is responsible for conducting evaluations of Federal programs administered by the Secretary to determine the impact of such programs on student outcomes. The Commissioner of NCEE also serves as the Department's Evaluation Official (EO).
     - **Recent examples of good practice:** In cases where the findings from an IES impact evaluation are counter to an administration's policy stance, the conduct of the study and the reporting of the findings by IES are generally well-protected by ESRA. However, the role of IES scientific staff in the use of the findings in policy-making by the Department is less well-defined. The best examples of practice have been when the EO and NCEE staff provided guidance and guardrails to Department political/policymaking staff

regarding interpretations and conclusions from the evidence and outlined risks associated with interpretations that went beyond those boundaries.

- **Challenges:** This example relies on a good working relationship, and a willingness of the policymaking staff to respect and use the guardrails provided by the scientific staff. In addition, several requirements of the Evidence Act (and the establishment of the EO, CDO, and SO roles) have muddied the situation for the relationship between IES and the Department, and have made the science/evidence/policy-making delineations less clear and more challenging (as we try to combine the requirements of ESRA with the requirements of the Evidence Act).

6. How do we support the continued professional development of our scientists?
   Example Practice:
   - **USGS** has traditionally encouraged the professional development of its scientific workforce through many different mechanisms, such as encouraging publication of results in peer-reviewed venues, attendance, and presentations at professional society meetings, celebrating honors and awards for its scientists. The USGS carries out a regular review of its research scientists through a peer-based research-grade evaluation system, which encourages long-term career development. Operational scientists do have career development pathways, but these are limited by the full performance levels specified by their position descriptions. The Presidential Early Career Award for Scientists and Engineers (PECASE) is also a nice example of rewarding early-career scientists.

Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking

JANUARY 27, 2021

MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

It is the policy of my Administration to make evidence-based decisions guided by the best available science and data. Scientific and technological information, data, and evidence are central to the development and iterative improvement of sound policies, and to the delivery of equitable programs, across every area of government. Scientific findings should never be distorted or influenced by political considerations. When scientific or technological information is considered in policy decisions, it should be subjected to well-established scientific processes, including peer review where feasible and appropriate, with appropriate protections for privacy. Improper political interference in the work of Federal scientists or other scientists who support the work of the Federal Government and in the communication of scientific facts undermines the welfare of the Nation, contributes to systemic inequities and injustices, and violates the trust that the public places in government to best serve its collective interests.

This memorandum reaffirms and builds on the Presidential Memorandum of March 9, 2009 (Scientific Integrity), and the Director of the Office of Science and Technology Policy's Memorandum of December 17, 2010 (Scientific Integrity).

By the authority vested in me as President by the Constitution and the laws of the United States of America, I direct as follows:

Section 1. Role of the Director of the Office of Science and Technology Policy. The Director of the Office of Science and Technology Policy (Director) shall ensure the highest level of integrity in all aspects of executive branch involvement with scientific and technological processes. This responsibility shall include ensuring that executive departments and agencies (agencies) establish and enforce scientific-integrity policies that ban improper political interference in the conduct of scientific research and in the collection of scientific or technological data, and that prevent the suppression or distortion of scientific or technological findings, data, information, conclusions, or technical results. In implementing this memorandum, the Director shall, as appropriate, convene and confer with the heads of agencies and with personnel within the offices of the Executive Office of the President, including the Office of Management and Budget.

Sec. 2. Task Force on Scientific Integrity. (a) The Director shall convene an interagency task force (the "Task Force") of the National Science and Technology Council (NSTC) to conduct a thorough review of the effectiveness of agency scientific-integrity policies developed since the issuance of the Presidential Memorandum of March 9, 2009.

(b) The Task Force shall complete its review within 120 days of the date of the appointment of its members, and shall take the following actions when completing its review.

(i) The Task Force shall ensure its review considers whether existing Federal scientific-integrity policies prevent improper political interference in the conduct of scientific research and the collection of scientific or technological data; prevent the suppression or distortion of scientific or technological findings, data, information, conclusions, or technical results; support scientists and researchers of all genders, races, ethnicities, and backgrounds; and advance the equitable delivery of the Federal Government's programs.

(ii) The Task Force's review shall include an analysis of any instances in which existing scientific-integrity policies have not been followed or enforced, including whether such

deviations from existing policies have resulted in improper political interference in the conduct of scientific research and the collection of scientific or technological data; led to the suppression or distortion of scientific or technological findings, data, information, conclusions, or technical results; disproportionately harmed Federal scientists and researchers from groups that are historically underrepresented in science, technology, and related fields; or impeded the equitable delivery of the Federal Government's programs. The scope of this review shall include the work of scientific and technological advisory committees, boards, and similar bodies. The existing policies examined by this review shall include those issued pursuant to the Presidential Memorandum of March 9, 2009, and the Director's Memorandum of December 17, 2010; any other scientific-integrity policies published on agency websites; and commonly accepted scientific-integrity practices.

(iii) The Task Force shall identify effective practices regarding engagement of Federal scientists, as well as contractors working on scientific matters for agencies, with news media and on social media; effective policies that protect scientific independence during clearance and review, and that avoid improper political interference in research or data collection; effective approaches for handling any disagreements about scientific methods and conclusions; effective reporting practices that promote transparency in the implementation of agency scientific-integrity policies and in the handling of any allegations of misconduct; effective practices for educating and informing employees and contractors of their rights and responsibilities related to agency scientific-integrity policies; promising opportunities to address gaps in current scientific-integrity policies related to emerging technologies, such as artificial intelligence and machine-learning, and evolving scientific practices, such as citizen science and community-engaged research; effective approaches to minimizing conflicts of interest in Federal Government science; and policies that support the professional development of Federal scientists in accordance with, and building on, section IV of the Director's Memorandum of December 17, 2010.

(iv) To inform the review, the Task Force shall gather input from stakeholders and the public regarding scientific-integrity practices. The Task Force shall consider obtaining such input through various means, which may include holding a virtual stakeholder summit hosted by the

Office of Science and Technology Policy (OSTP), issuing a public request for information, and conducting a virtual listening tour or open forums.

(v) Upon the conclusion of its review, the Director shall publish a report on the OSTP website synthesizing the Task Force's findings. The report shall include a description of agencies' strengths and weaknesses regarding scientific-integrity policies, as well as a description of best practices and lessons learned.

(c) Within 120 days of the publication of the Task Force's initial 120-day review of existing scientific-integrity policies, the Task Force shall develop a framework to inform and support the regular assessment and iterative improvement of agency scientific-integrity policies and practices, to support the Director and OSTP in ensuring that agencies adhere to the principles of scientific integrity. This framework shall include assessment criteria that OSTP and agencies can use to inform, review, and improve the design and implementation of agency scientific-integrity policies. The Director shall publish this framework on the OSTP website.

Sec. 3. Agency Scientific-Integrity Policies. (a) Heads of agencies shall ensure that all agency activities associated with scientific and technological processes are conducted in accordance with the 6 principles set forth in section 1 of the Presidential Memorandum of March 9, 2009, and the 4 foundations of scientific integrity in government set forth in part I of the Director's Memorandum of December 17, 2010.

(b) Heads of agencies shall ensure that their agency scientific-integrity policies reflect the findings in the Task Force report produced under section (2)(b)(v) of this memorandum and apply to all agency employees, regardless of the nature of their appointment, as well as contractors who perform scientific activities for agencies. Heads of agencies shall coordinate with the Director in the development, updating, and implementation of any agency-specific policies or procedures deemed necessary to ensure the integrity of scientific decision-making. The following time frames shall apply when completing the activities described in this subsection:

(i) The head of each agency with an existing scientific-integrity policy shall submit an updated policy to the Director within 180 days of the publication of the Task Force's report.

(ii) The head of each agency without an existing scientific-integrity policy shall submit a draft agency scientific-integrity policy to the Director within 180 days of the publication of the Task Force's report.

(iii) The Director shall expeditiously review scientific-integrity policies submitted by the agencies to ensure that the policies respond to the Task Force's analysis, adhere to the policy directives in this memorandum, and uphold the highest standards of scientific practice.

(iv) The Director shall notify agencies of any deficiencies in the scientific-integrity policies and collaborate with agencies to expeditiously correct those deficiencies.

(c) In implementing this section, heads of agencies shall:

(i) Provide the Director with any information the Director deems necessary to conduct the Director's duties under this memorandum;

(ii) Publish the agency's scientific-integrity policy on the agency's website, and disseminate information about the policy through the agency's social media channels;

(iii) Develop and publish procedures, as appropriate and consistent with applicable law, for implementing the agency's scientific-integrity policy, including establishing and publishing an administrative process for reporting, investigating, and appealing allegations of deviations from the agency's policy, and for resolving any disputes or disagreements about scientific methods and conclusions;

(iv) Review and, as needed, update within 60 days of the date of this memorandum any website content, and within 300 days of the date of this memorandum any agency reports, data, and other

agency materials issued or published since January 20, 2017, that are inconsistent with the principles set forth in this memorandum and that remain in use by the agency or its stakeholders;

(v) Educate agency employees, as well as contractors who perform scientific activities for the agency, on their rights and responsibilities related to scientific integrity, including by conducting routine training on the agency's scientific-integrity policy for all employees, and by ensuring any new employees are made aware of their responsibilities under the agency's scientific-integrity policy shortly after they are hired; and

(vi) Publish, consistent with any requirements related to national security and privacy, as well as any other applicable law, an annual report on the agency's website that includes the number of administrative investigations and appeals involving alleged deviations from the agency's scientific-integrity policies, as described in section (3)(c)(iii) of this memorandum, for the year covered by the report, and the number of investigations and appeals pending from years prior to the year covered by the report, if any.

Sec. 4. Publication of Scientific-Integrity Policies and Ongoing Biennial Reporting. (a) The Director shall publish on the OSTP website, and disseminate via social media, information about this memorandum, related OSTP and NSTC reports on scientific integrity, and links to the scientific-integrity policies posted on agency websites, to ensure such information and policies can be easily accessed by the public.

(b) The Director shall publish on the OSTP website, and disseminate via social media, a biennial report on the status of the implementation of this memorandum across the executive branch. This report shall include a review of the impact on scientific integrity of diversity, equity, and inclusion practices related to the Federal scientific and engineering workforce and scientific Federal advisory committees.

Sec. 5. Evidence-Based Policymaking. (a) Heads of agencies shall ensure that the scientific-integrity policies of their agencies consider, supplement, and support their plans for forming

evidence-based policies, including the evidence-building plans required by 5 U.S.C. 312(a) and the annual evaluation plans required by 5 U.S.C. 312(b).

(b) Within 120 days of the date of this memorandum, after consultation with the Director, the Director of the Office of Management and Budget (OMB) shall issue guidance to improve agencies' evidence-building plans and annual evaluation plans. Specifically, the Director of OMB shall consider whether, consistent with, and building upon, Executive Order 13707 of September 15, 2015 (Using Behavioral Science Insights to Better Serve the American People), agencies' evidence-building plans and annual evaluation plans shall include a broad set of methodological approaches for the evidence-based and iterative development and the equitable delivery of policies, programs, and agency operations. Relevant approaches might include use of pilot projects, randomized control trials, quantitative-survey research and statistical analysis, qualitative research, ethnography, research based on data linkages in which records from two or more datasets that refer to the same entity are joined, well-established processes for community engagement and inclusion in research, and other approaches that may be informed by the social and behavioral sciences and data science.

(c) The statutory positions required to be designated by agencies by the Foundations for Evidence-Based Policymaking Act of 2018 (Public Law 115-435), which include the Evaluation Officer, the Chief Data Officer, and a senior statistical official, shall incorporate scientific-integrity principles consistent with this memorandum into agencies' data governance and evaluation approaches. Similarly, the Chief Data Officers Council shall incorporate scientific-integrity principles consistent with this memorandum into its efforts to establish government-wide best practices for the use, protection, dissemination, and generation of data, and both the Chief Data Officers Council and the Evaluation Officer Council shall identify ways in which agencies can improve upon the production of evidence for use in policymaking.

(d) Consistent with the provisions of the Foundations for Evidence-Based Policymaking Act of 2018, heads of agencies shall, as appropriate and consistent with applicable law, expand open and secure access to Federal data routinely collected in the course of administering Federal, State, local, Tribal, or territorial government programs or fulfilling Federal, State, local, Tribal,

or territorial government mandates, such as tax data, vital records, other statistical data, and Social Security Administration earnings and employment reports, to ensure governmental and non-governmental researchers can use Federal data to assess and evaluate the effectiveness and equitable delivery of policies and to suggest improvements. In implementing this provision, heads of agencies shall:

(i) Make these data available by default in a machine-readable format and in a manner that protects privacy and confidential or classified information, and any other information protected from disclosure by law;

(ii) Publish an agency data plan that provides a consistent framework for data stewardship, use, and access. If publishing such a plan is not feasible, then the head of the agency shall publish guidelines outlining how the data were collected, metadata on data use, any limitations on data use, and ways for researchers to provide feedback on data shared;

(iii) Follow the mandates of the Information Quality Act (section 515 of Public Law 106-554) in assessing and making available to researchers information on the quality of the data being provided; and

(iv) Where possible, provide such data disaggregated by gender, race, ethnicity, age, income, and other demographic factors that support researchers in understanding the effects of policies and programs on equity and justice.

(e) The Director of OMB shall review whether guidance to agencies on implementation of the Information Quality Act needs to be updated and reissued.

(f) Heads of agencies shall review and expeditiously update any agency policies, processes, and practices issued or published since January 20, 2017, that prevent the best available science and data from informing the agency's evidence-based and iterative development and equitable delivery of policies and programs.

Sec. 6. Agency Chief Science Officers and Scientific Integrity Officials. (a) Within 120 days of the date of this memorandum, the heads of agencies that fund, conduct, or oversee scientific research shall, to the extent consistent with applicable law, designate a senior agency employee for the role of chief science officer, science advisor, or chief scientist ("Chief Science Officer"), who shall:

(i) Serve as the principal advisor to the head of the agency on scientific issues and ensure that the agency's research programs are scientifically and technologically well-founded and conducted with integrity; and

(ii) Oversee the implementation and iterative improvement of policies and processes affecting the integrity of research funded, conducted, or overseen by the agency, as well as policies affecting the Federal and non-Federal scientists who support the research activities of the agency, including scientific-integrity policies consistent with the provisions of this memorandum.

(b) Because science, facts, and evidence are vital to addressing policy and programmatic issues across the Federal Government, the heads of all agencies (not only those that fund, conduct, or oversee scientific research) shall designate expeditiously a senior career employee as the agency's lead scientific-integrity official ("Scientific Integrity Official") to oversee implementation and iterative improvement of scientific-integrity policies and processes consistent with the provisions of this memorandum, including implementation of the administrative and dispute resolution processes described in section (3)(c)(iii) of this memorandum. For agencies with a Chief Science Officer, the Scientific Integrity Official shall report to the Chief Science Officer on all matters involving scientific-integrity policies.

(c) To the extent necessary to fully implement the provisions of this memorandum, heads of agencies may designate additional scientific-integrity points of contact in different offices and components, who shall coordinate with the agency's Scientific Integrity Official in implementing the agency's scientific-integrity policies and processes.

(d) Heads of agencies should ensure those designated to serve in the roles described in this section, along with their respective staffs, are selected based on their scientific and technological knowledge, skills, experience, and integrity, including experience conducting and overseeing scientific research and utilizing scientific and technological information and data in agency decision-making, prioritizing experience with evidence-based, equitable, inclusive, and participatory practices and structures for the conduct of scientific research and the communication of scientific results.

(e) The Director or a designee of the Director shall regularly convene Chief Science Officers and Scientific Integrity Officials to encourage the discussion and expansion of effective scientific-integrity policies and practices among agencies.

Sec. 7. Scientific Advisory Committees. (a) Within 90 days of the date of this memorandum, heads of agencies shall review their current and future needs for independent scientific and technological advice from Federal advisory committees, commissions, and boards. The review should include an evaluation of those advisory bodies established by law, and should consider both current and anticipated needs.

(b) This review shall assess which Federal scientific and technological advisory committees should be rechartered or recreated to ensure that relevant and highly qualified external experts, with proper safeguards against conflicts of interest, can contribute to critical Federal regulations and other agency actions and decision-making. The review shall also identify any agency policies, processes, or practices that may currently prevent or inhibit relevant and highly qualified external experts from serving on such committees.

(c) In conducting this review, heads of agencies shall take steps to review the membership of scientific and technological advisory committees and, as appropriate and consistent with applicable law, ensure that members and future nominees reflect the diversity of America in terms of gender, race, ethnicity, geography, and other characteristics; represent a variety of backgrounds, areas of expertise, and experiences; provide well-rounded and expert advice to agencies; and are selected based on their scientific and technological knowledge, skills,

experience, and integrity, including prioritization of experience with evidence-based, equitable, inclusive, and participatory practices and structures for the conduct of scientific research and the communication of scientific results.

(d) Upon completion of their 90-day review, heads of agencies shall provide a summary report to the Director and the Director of OMB with recommendations on which Federal scientific and technological advisory committees should be rechartered or recreated in accordance with subsection (b) of this section; which scientific and technological advisory committees should be prioritized for membership appointments to ensure they provide well-rounded and expert advice reflecting diverse perspectives, in accordance with subsection (c) of this section; and which agency policies, processes, or practices, if any, should be updated to encourage relevant and highly qualified external experts to serve on such committees.

Sec. 8. General Provisions. (a) Nothing in this memorandum shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This memorandum shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

JOSEPH R. BIDEN JR.

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11. What are some good ways for resolving disagreements concerning scientific methods or conclusions?
    Example practices:
    - **DHS S&T** requires that proposed research at the Centers of Excellence complies with both the university's and DHS's requirements for Human Subject Research, Animal Care & Handling, Data Privacy, etc. Once the research plan has been validated, S&T doesn't place any restrictions on the release/publication of COE results.

    - **Combination of role and structure established in legislation, and a good working relationship:** The Institute of Education Sciences (IES) is the non-partisan research, evaluation, and statistics arm of the Department of Education, and was established by the Education Sciences Reform Act of 2002 (ESRA). ESRA stipulates that IES' work be objective, secular, neutral, nonideological, and free of partisan political influence and racial, cultural, gender, or geographic bias. ESRA mandates that statistics, evaluation, or research reports that are supported or produced by IES undergo rigorous peer review, and also grants IES independent publication authority (approval from the Secretary or any other Department office is not required or sought). IES' National Center for Education Evaluation and Regional Assistance (NCEE)is responsible for conducting evaluations of Federal programs administered by the Secretary to determine the impact of such programs on student outcomes. The Commissioner of NCEE also serves as the Department's Evaluation Official (EO).
      - **Recent examples of good practice:** In cases where the findings from an IES impact evaluation are counter to an administration's policy stance, the conduct of the study and the reporting of the findings by IES are generally well-protected by ESRA. However, the role of IES scientific staff in the use of the findings in policy-making by the Department is less well-defined. The best examples of practice have been when the EO and NCEE staff provided guidance and guardrails to Department political/policymaking staff regarding interpretations and conclusions from the evidence and outlined risks associated with interpretations that went beyond those boundaries.

- **Challenges:** This example relies on a good working relationship, and a willingness of the policymaking staff to respect and use the guardrails provided by the scientific staff. In addition, several requirements of the Evidence Act (and the establishment of the EO, CDO, and SO roles) have muddied the situation for the relationship between IES and the Department, and have made the science/evidence/policy-making delineations less clear and more challenging (as we try to combine the requirements of ESRA with the requirements of the Evidence Act).

12. How do we support the continued professional development of our scientists?
    Example Practice:
    - **USGS** has traditionally encouraged the professional development of its scientific workforce through many different mechanisms, such as encouraging publication of results in peer-reviewed venues, attendance, and presentations at professional society meetings, celebrating honors and awards for its scientists. The USGS carries out a regular review of its research scientists through a peer-based research-grade evaluation system, which encourages long-term career development. Operational scientists do have career development pathways, but these are limited by the full performance levels specified by their position descriptions. The Presidential Early Career Award for Scientists and Engineers (PECASE) is also a nice example of rewarding early-career scientists.